

Flexible Partnering with the American Red Cross During Hurricane Katrina and Rita

Maggie K. Elestwani, RN
Chair, GHAC Disaster Health Services,
Houston Area Katrina-Rita DHS Manager

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Volunteer Board Member, HCHD MRC (Houston)  
MRC National Conference 2006

“When the going  
gets tough...



# Flexible Partnering with the American Red Cross

## Learning Objectives

1. Components of Successful Partnering with the ARC Disaster Health Services (DHS) – Education & Approach
  2. Coordination of ARC DHS Emergency Assistance Teams – Supporting Communities when the Grid is Down
  3. Supporting ARC Syndromic Surveillance Efforts during Disaster –the Houston Katrina-Rita Experience
  4. Shelter-based Disaster Health Services – Where the Rubber Meets the Road
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# Components of Successful Partnering with the ARC DHS

## Fundamental Principles of the American Red Cross

**Humanity**

***Impartiality***

***Neutrality***

***Independence***

***Voluntary Service***

***Unity***

***Universality***

## ARC DHS Commitment

To provide health-related services and secure resources to meet the health needs of people affected by disaster and of staff providing disaster relief.

## The 7 Key DHS Values

Follow Protocols to Meet Immediate Health Needs

Make Effective Referrals

Identify & Prevent Potential Health Problems

Document for Continuity of Care

Work as a Team

Use Resources Wisely – pro bono or sliding scale

Respect Confidentiality

# Components of Successful Partnering with the ARC DHS

## Teamwork in the American Red Cross:

### (Disaster Functions) –

Disaster Health Services  
(DHS)

Disaster Mental Health  
(DMHS)

Family Services

Mass Care

Administration

Damage Assessment

Disaster Welfare Inquiry

Local Disaster Volunteers

Training

Records & Reports

Logistics

Staffing

# Components of Successful Partnering with the ARC DHS

## Disaster Level Designations

Level One – Chapter  
Response

Level Two – Chapter  
Response

Level Three – Service Area  
Support

Level Four – Service Area  
Response

Level Five – National  
Response

## ARC DHS Sites of Service

Shelter

Service Center

Emergency Aid Station

Kitchen

Warehouse

Home Visit

Outreach

Hospital Contacts

Staging or Watch Area

# Components of Successful Partnering with the ARC DHS

ARC 30-3042 or the Gameplan:

- The Context of Care
- Ascending Responsibilities of DHS Function
- Initiating the DHS Response ( from the Local Response to a Service Area Delivery Plan to Coordination)
- Working with the Research Community, Public Health, and a Community's Health Care System
- ARC DHS Services to Disaster Victims
- ARC DHS Services for Red Cross Staff
- Supplementing a Community's Health Care System
- Providing Information to CDC
- Documentation
- Closing a DHS Function
- Annexes & Appendices – including Special Responsibilities during Catastrophic Disaster

# Components of Successful Partnering with the ARC DHS

## 30-3042P for Protocols – the DHS Toolkit

### -General Guidelines

including Assessment, Priorities in Emergency Care, Classification of Symptoms and Conditions, Management of Chronic Pre-existing Conditions, Infection Control

### -Alphabetical Protocols

including system-focused complaints, first aid, bites, emergencies, and symptoms of chronic illness

### -Communicable Diseases

\*ARC DHS Liability is covers licensed personnel working within their scope of practice giving safe and appropriate care under ARC policy & protocols

\*Anticipated July 2006 Catastrophic Protocols



# Components of Successful Partnering with the ARC Disaster Health Services

## ARC DHS Forms/

### Critical NTK (Need to Know):

- 5854/ 5854A** (Release of Confidentiality for Disaster Victim & Staff)
- 2077** (Health Record) & **2077C** (CDC Morbidity Report if disaster-related)
- 2077A** (CDC Fatality Report if disaster-related for All Deaths that occurred during the disaster)
- 1475** (Client Assistance Memorandum), **901** (Case Record/Family), **D.O.** (Disbursing Order ~ Check)
- Other: **Treatment Declined, Home Visit, Hospital Contacts, ARC Staff Confined or Hospitalized**
- DHS Personnel Roster** (critical to sign in & out), **ARC Evaluation Forms** (End of Tour)
- DHS Daily Report** and **Final Report** (data from all care given on your site contributes to this)

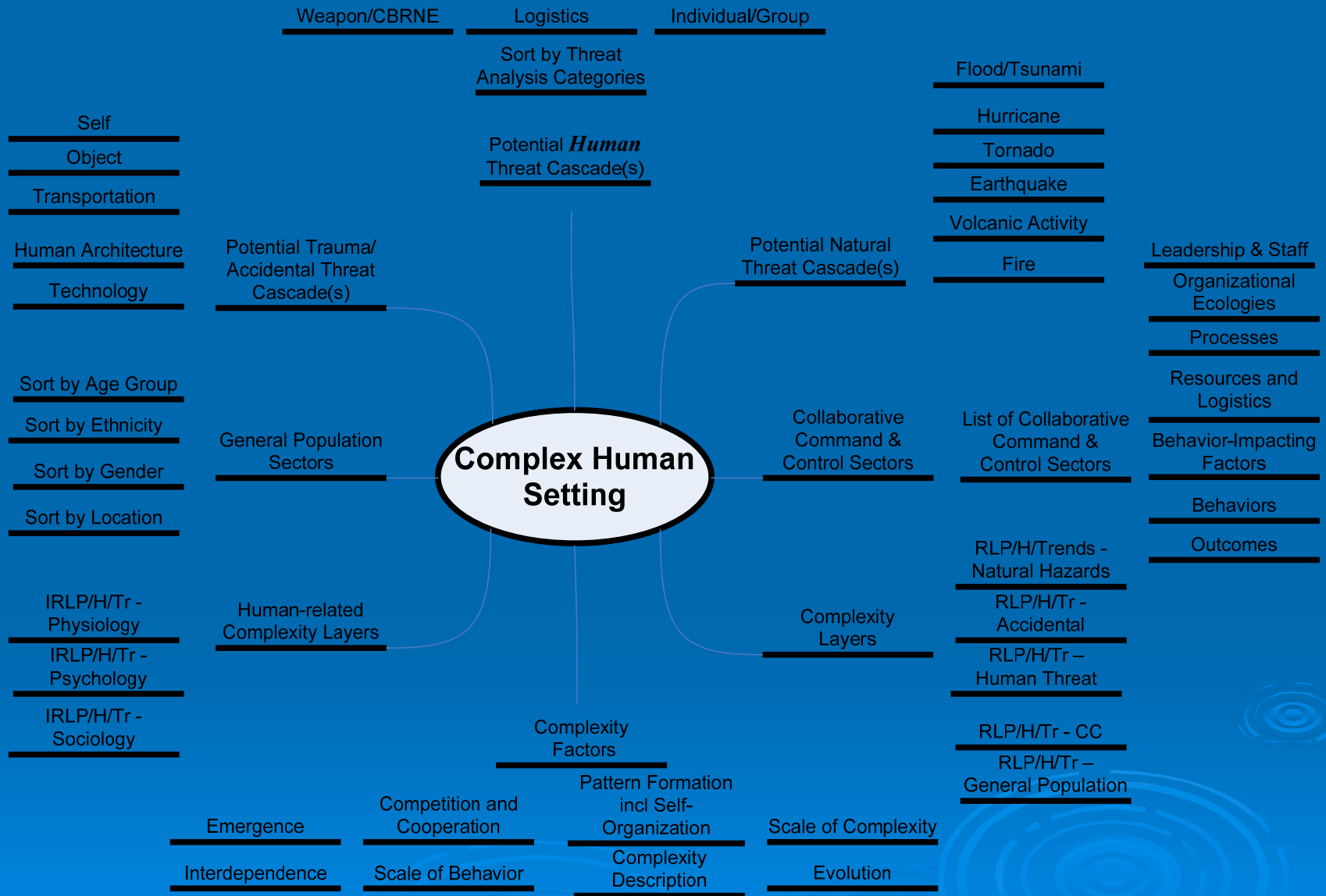
# Components of Successful Partnering with the ARC DHS

Familiar Phrases –

*“Red Cross Flexible”*

*“Hurry Up & Wait”*





# Hurricane Katrina (RMS, 2005)

- Insured Losses between \$40-\$60B
- Hurricane force winds across 250 miles of coastline and 100 miles inland
- 30 foot Storm Surge in low-lying areas
- Greater New Orleans flood (80%) with an estimated 100,000 unevacuated
- Trapped population endured civil unrest, health hazards, and infrastructure failure

# Hurricane Katrina Disaster Epidemiology

CDC Morbidity & Mortality Weekly Reports  
(MMWR) -

-Infectious Disease (Skin Conditions/ including  
Vibrio sp., Diarrheal Disease/ including norovirus  
sp., and Respiratory Disease/ including  
identification of the location and continuing the  
care for TB Direct Observation Treatment  
patients)

-Carbon Monoxide Poisoning

# Hurricane Katrina Disaster

## Epidemiology con't

Harris County Medical Examiner Office (HCMEO)  
listing of deaths related to H. Katrina

-Total=72 Deaths in Harris County

-Race: Black – 35, White – 31, Hispanic – 3,  
Asian - 2

-Gender: Male – 33, Female- 39

-Age <5y -(3); <18y - (0)  
65+y – (40); 18-64y - (29)

# Hurricane Katrina Disaster Epidemiology con't

Harris County Medical Examiner Office  
(HCMEO) listing of deaths related to H.  
Katrina

## Cause of Death

Natural 59      Homicide 3

Suicide 2      Pending 8

All deaths occurred after 24h of landfall

# Hurricane Rita (RMS, 2005)

- Insured Losses between \$4-7Billion
- New Orleans flooding pre-landfall
- Hurricane force winds across 170 miles of coastline
- Storm Surge in low-lying areas
- Includes \$1-2Billion estimated offshore platform damage and loss of production



# Hurricane Rita Disaster Epidemiology - Harris County

## HCMEO Excel Analysis – H. Rita

- Total = 35
- Race: Black – 8, White – 22, Hispanic – 5, Asian – 0
- Gender: Male – 15, Female- 20
- Age <5y -(1); <18y - (1)  
65+y – (22); 18-64y - (11)
- All deaths were pre-landfall (26) or post-landfall (9)

# Hurricane Rita Disaster Epidemiology – Harris County con't

## Circumstances of Death

- In process of self-evacuation 20
- MVC/Evacuation 2
- Nursing Home Evacuee 5
- Unresponsive at private residence or hotel 4
- Fire 1
- Carbon Monoxide 1
- Other 2

# Hurricane Rita Disaster

## Epidemiology con't

### North Texas Bus Explosion

(Houston Chronicle)

Sept. 23., 2005

Interstate 45 near Dallas

- 44 passengers - including 1 driver, 6 medical staff, and 37 nursing home residents from a Houston nursing home
- 24 Nursing Home residents died

# CDC Morbidity & Mortality Weekly Reports (MMWR) - H. Katrina

**MMWR - Infectious Disease and Dermatologic Conditions in Evacuees and Rescue Workers After Hurricane Katrina --- Multiple States, August--September, 2005**

## **Dermatologic Conditions**

*Evacuees:* MRSA/ *Vibrio vulnificans*/ *Vibrio parahaemolyticus*

*Rescue Workers:* Tinea Corporis/ folliculitis-type

*Rescue Workers:* (non-infectious etiology) prickly heat/ anthropod (likely mite) bite lesions/ circumferential lesions likely chafing-related

## **Diarrheal Disease**

Diarrhea and Vomiting in evacuee & rescue (& disaster) worker populations

Norovirus or Norwalk virus positive cultures in some clusters  
(requires immediate culture and only available in certain labs)

Also: Sporadic nontyphoidal *Salmonella*, nontoxigenic

*Vibrio cholerae* O1

NO CONFIRMED CASES: *Shigella* dysentery, typhoid fever, toxigenic *Vibrio cholerae*

# CDC Morbidity & Mortality Weekly Reports (MMWR) - H. Katrina

## Respiratory Disease

Pertussis

Tuberculosis (new cases identified and direct observation treatment patients located)

## Editorial Note:

“Environmental conditions after natural disasters increase the risk for infectious disease.”

*Evacuation centers (congregate locations) are at high risk.*

*Extensive flooding can increase risk for exposure to waterborne agents and vectors such as mosquitoes*

*Hurricane survivors can suffer wounds that can become infected (V. vulnificans). Persons with underlying illness, i.e., diabetes might become more susceptible.*

*Congregate locations with crowding and unsanitary conditions can amplify the transmission of infectious disease. 1 type confirmed - norovirus.*

# CDC Morbidity & Mortality Weekly Reports (MMWR) - H. Katrina

***Previous natural disasters epidemiology validated – skin, diarrhea, respiratory disorders most common***

*“Infectious disease outbreaks are rare following natural disasters, especially in developed countries...specific etiologies are usually predictable, reflecting infectious disease endemic to the affected region before the disaster”*

***First few days post disaster – injury & soft tissue infections (including carbon monoxide poisoning)***

***Up to one month after a disaster – Airborne, waterborne, and foodborne diseases***

*Potential exposure to dead bodies, human & animal – no evidence exists that exposure to bodies after a disaster leads to infectious disease epidemics. However persons handling corpses and carcasses might be exposed to infectious pathogens & should use appropriate protective equipment*

**\*Note impact of natural disaster on public health (& private) infrastructure for communicable disease surveillance & control**

# CDC Resources Hurricane Emergency Preparedness and Response – Public Health and Occupational Health

## **CDC Emergency Preparedness and Response Website Hurricanes page**

<http://www.bt.cdc.gov/disasters/hurricanes/mmwr.asp>

CDC Morbidity & Mortality Weekly Reports (MMWR)  
epidemiology studies

CDC guidance for general & specific groups  
(disaster workers, health professionals, evacuees,  
volunteers, evacuation/congregate centers)

CDC Preparedness and Response links (threats, mental health,  
training & education, surveillance, news)

# Coordination of ARC DHS Emergency Assistance Teams

## 2005 Houston ARC DHS Operation Hybrid

- Coordinated by Fairfax County MRC member, J. Wooden EMT
- Reported to ARC DHS Houston Manager via EAS Coordinator
- Houston & Beaumont Operations Area clearance to function
- Utilized a hybrid of 30-3042: Disaster Action Team (DAT), Emergency Aid Station, Home Visit, Mass Care Kitchens, and Outreach



# Coordination of ARC DHS Emergency Assistance Teams

## 2005 Houston ARC DHS Operation Hybrid

- Developed 4-6 teams: Alpha, Bravo, Charlie, Delta, Fox
- Composition: 4-5 members ideally including an EMT and MD
- Working in highly affected counties lacking power, utilities, and acute care facilities (pre-existing), with strained EMS resources
- Clients Served: non-evacuated populations, returnees, emergency/ disaster workers
- Daily Meeting (phone or in person) with Coordinator, Written Daily Update, Standard DHS documentation and care under policy & protocols, Standard Katrina-Rita Houston area 2005 Syndromic Surveillance responsibilities
- Flexible response in the field to meet the scale of operations, creative problem solving

# Coordination of ARC DHS Emergency Assistance Teams

## **Major Issues**

- Safety First and Staying on the ARC DHS Grid
- Span of Control
- Political Sensitivities
- Providing Care in a Fluid Environment

## **Case Studies**

- Big Thicket Tag Team
- Utility Worker 500

# Supporting ARC Syndromic Surveillance Efforts during Disaster – the Houston Katrina-Rita Experience

## Traditional ARC DHS Syndromic Surveillance

- **2077C** (CDC Morbidity Report if disaster-related)
- **2077A** (CDC Fatality Report if disaster-related for All Deaths that occurred during the disaster)
- DHS Daily Report
- Final Report

## 2005 Houston Area ARC DHS Daily Multiple Requests

- City of Houston Public Health
- Harris County Public Health & any County P.H. (13 Counties in GHAC)
- Texas Department of State Health Services Regional and Preparedness Offices

# Supporting ARC Syndromic Surveillance Efforts during Disaster – the Houston Katrina-Rita Experience

## ARC DHS Houston 2005 Katrina-Rita Response on Syndromic Surveillance

Combined Daily Syndromic Surveillance Packet/ Site  
Produced by National ARC DHS Consultants from Johns Hopkins University, School of Public Health (Klagg, et al.)

Reporting Coordination Team included MRC member J. Mitchell, LVN

## Summary Formats Developed

- Syndromic Surveillance Summary for all sites
- Shelter Case Management Summary for all sites

# Shelter-based Disaster Health Services

## – “Where the rubber meets the road”

### 2005 ARC DHS Houston Shelter Care

- ARC DHS teams** consisted of enrolled ARC DHS Houston volunteers, Local Disaster Volunteers (same credentialing requirements), MRC, and DSHR
- Sites** varied from Mega-shelters outside Reliant Park & George R. Brown CC to small church shelters to non-ARC shelters with ARC request & clearance
- Clients** included high numbers of special needs and other vulnerable evacuees
- Staff Health needs** were also high
- Developed **Shelter Case Management form**
- Participated in **Houston Mayoral Health Care Taskforce** which developed the **Katrina Clinics**
- Flexibly responded** in initial phase, surge phase, zone management phase, combined shelter-EAS phase, and final close-out phase
- Response phases demarcated** by shelter-site numbers, varying evacuee numbers and their resources, varying ARC DHS staff numbers, varying ARC DHS resources, varying status of community's health care delivery system

# Shelter-based Disaster Health Services

## – “Where the Rubber meets the Road”

### A Typical DHS Caseload in an ARC Houston General Needs Shelter

- Pregnant and Newborn Clients
- Post-op Clients
- Chronic Illness (Hypertension, Diabetes, COPD, Asthma)
- Upper Respiratory Illness (syndromic surveillance for reportable diseases like TB)
- Skin Conditions (syndromic surveillance for reportable conditions)
- Tertiary Care Referrals
- EMS Transports
- Dialysis Arrangements
- Mobile Health Care Van Clients
- Multicultural Client Setting

# Flexible Partnering with the American Red Cross

## Summary:

- Remember Familiar Phrases – ***“Red Cross Flexible”*** - ***“Hurry Up & Wait”***
- Train/learn policies & procedures before the season*
- Policies & procedures may change*
- Environments are fluid*
- Multiple sites*
- Develop the “Island of Calm” as you do your disaster work*
- Teamwork*
- Remember Safety First – Stay Aware for clients, team, and self*
- ARC DHS Staff Health & DMHS available 24h*
- Take time to make friends, have a personal space, & take care of yourself*

“When the going  
gets tough...





# Thank You for Being a Great ARC DHS Partner!

## Contact Information:

Maggie K. Elestwani, RN

Chair, Disaster Health Services Committee

Greater Houston Area Chapter

ARC, 2700 Southwest Freeway

Houston , TX 77502

(281) 709-7269

[melestwani@msn.com](mailto:melestwani@msn.com)